

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of the claims:**

A1  
1. (Currently Amended) An isolated polynucleotide that encodes a human  $\beta$ 1A\_sodium channel subunit protein, said polynucleotide comprising a ~~member~~ sequence selected from a group consisting of:

(a) a polynucleotide ~~having at least a 75% identity to a~~ polynucleotide encoding a ~~polypeptide consisting of amino acids~~ 1 to 268 of SEQ.ID.NO. SEQ ID NO:14;

(b) a polynucleotide ~~having at least 75% identity to a~~ polynucleotide encoding a polypeptide ~~consisting of~~ comprising amino acids 150 to 268 of SEQ.ID.NO. SEQ ID NO:14;

~~— (c) a polynucleotide which is complementary to the polynucleotide of (a) or (b); and~~

~~— (d) a polynucleotide comprising at least 15 sequential bases of the polynucleotide of (a), (b), or (c).~~

2. (Original) The polynucleotide of claim 1 wherein the polynucleotide is RNA.

3. (Original) The polynucleotide of claim 1 wherein the polynucleotide is DNA.

4. (Currently Amended) The polynucleotide of claim 1, having a nucleotide sequence selected from a the group consisting of ~~(SEQ.ID.NO. SEQ ID NO:12)~~ and ~~(SEQ.ID.NO. SEQ ID NO:13)~~.

5. (Currently Amended) The polynucleotide of claim ~~4~~ 1 ~~further~~ having a nucleotide sequence selected from the group consisting of allelic variants, ~~mutants, and functional derivatives~~ of ~~(SEQ.ID.NO. SEQ ID NO:12)~~ and ~~(SEQ.ID.NO. SEQ ID NO:13)~~.

6. (Currently Amended) The polynucleotide of claim 1, wherein said ~~DNA molecule~~ polynucleotide is genomic DNA.

7. (Currently Amended) An expression vector for expression of a human  $\beta$ 1A sodium channel subunit protein in a recombinant host, wherein said vector contains a recombinant ~~gene~~ polynucleotide encoding a ~~human  $\beta$ 1A sodium channel subunit protein and functional derivatives thereof~~ SEQ ID NO:14.

8. (Currently Amended) The expression vector of claim 7,  
wherein the expression vector contains a ~~cloned gene~~  
polynucleotide encoding a ~~Human~~ human  $\beta$ 1A sodium channel subunit  
protein, and having a nucleotide sequence selected from a the  
group consisting of: ~~(SEQ.ID.NO. SEQ ID NO:12)~~, SEQ ID NO:13,  
allelic variants of SEQ ID NOS:12 or 13, and ~~(SEQ.ID.NO.:13)~~  
functional derivatives of SEQ ID NOS:12 or 13.

9. (Currently Amended) The expression vector of claim 8,  
wherein the ~~group further consists of allelic variants, mutants,~~  
~~and functional derivatives of nucleotide sequence is~~  
~~SEQ.ID.NO. SEQ ID NO:12 and or SEQ.ID.NO. SEQ ID NO:13.~~

10. (Currently Amended) The expression vector of claim 7,  
wherein the expression vector contains genomic DNA encoding a  
~~Human~~ human  $\beta$ 1A sodium channel subunit protein of SEQ ID NO:14.

11. (Currently Amended) A ~~recombinant~~ host cell containing a  
~~recombinantly cloned gene~~ recombinant polynucleotide encoding a  
~~Human~~ human  $\beta$ 1A sodium channel subunit protein of SEQ ID NO:14  
or a functional derivative thereof.

Cont  
A1

12. (Currently Amended) The ~~recombinant~~ host cell of claim 11, wherein said ~~gene~~ polynucleotide has a nucleotide sequence selected from a the group consisting of: ~~(SEQ.ID.NO.:12),~~ SEQ ID NO:12, ~~(SEQ.ID.NO.:13),~~ and SEQ ID NO:13 ~~functional derivatives thereof.~~

13. (Currently Amended) The ~~recombinant~~ host cell of claim 11, wherein said ~~cloned gene~~ polynucleotide is genomic DNA.

14-16      Withdrawn

17. (Currently Amended) A process for ~~expression of~~ expressing a ~~Human~~ human  $\beta$ 1A sodium channel subunit protein in a ~~recombinant~~ host cell, comprising:

(a) introducing an expression vector encoding a human  $\beta$ 1A sodium channel subunit protein, into a cell, wherein the vector comprising comprises a nucleic acid sequence capable of hybridizing ~~under stringent hybridization conditions~~ to a nucleotide sequence, ~~or its complementary sequence,~~ having the sequence of SEQ ID NO:12 or SEQ ID NO:13, or its complementary sequence, wherein the hybridization conditions comprise incubation in 50% formamide, 6X SSC, 1% SDS at 42 C for 12-19

Cont  
A1  
hours, washing in at least two successive washes at 22 C,  
followed by stringent washes at 65 C in a buffer of 0.04M sodium  
phosphate, pH 7.2, 1% SDS and 1mM EDTA;

(b) culturing the cell of step (a) under conditions which  
allow expression of a protein encoded by the ~~nucleotide sequence~~  
expression vector.

18-35 (Withdrawn)

---